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Ralf Schmeling

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CNH AMERICA LLC

INTELLECTUAL PROPERTY LAW DEPARTMENT

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EXAMINER

GARCIA, ERNESTO

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Drawings***

The drawings were received on June 30, 2008. These drawings are accepted.

### ***Claim Objections***

Claims 1 and 6 are objected to because of the following informalities:

regarding claim 1, a comma should be inserted after "first" in line 1; and,

regarding claim 6, a comma should be inserted after "tube" in line 13.

Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

### ***Claim Rejections - 35 USC § 112***

Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, there is an inconsistency between the language in the preamble and a certain portion in the body of the claim, thereby making the scope of the claim unclear. The preamble clearly indicated that the bearing is “for articulating first, second and third components on a boom of a construction machine”. However, the body of the claim positively recites “the first component”, “the second component”, and “the third component”, e.g., “the first component and the second component are borne alongside each other on the external diameter of the bearing tube” (lines 11-12), and “the third component transmits a force to the pin and is borne on one or both the outer protruding ends of the pin” (lines 13-14), which indicates that the claims are being drawn to a combination of the “bearing” and the three components, i.e., the “first, second and third components”. Accordingly, is the combination or subcombination being claimed? Appropriate correction, clarification, or both is required. For purposes of this Office action, the examiner has assumed the three components being part of the bearing.

Regarding claim 6, the recitation “a first boom component” in lines 3-4 makes unclear whether this is another first boom component than that recited in line 2, or the same first component. The recitation “the second end” in line 3 lacks proper antecedent basis. The claim cannot recite a second end when no first end has ever been recited. The recitation “constant external diameter” in line 6 is misdescriptive and/or inaccurate since the external diameter of the pin is not constant as the central portion has a diameter that decreases relative to the two ends of the pin. The recitation “a bearing

tube” in line 7 makes unclear whether this is another a bearing tube than that recited in line 5 or the same one.

Regarding claims 2, 4, and 5, the claims depend from claim 1 and therefore are indefinite.

Regarding claims 7-12, the claims depend from claim 6 and therefore are indefinite.

### ***Claim Rejections - 35 USC § 102***

At the outset, it should be noted that it is the patentability of the device (i.e., the bearing), and not how such device is intended to be used, that is to be determined. Accordingly, “for...a boom of a construction machine” has been given little patentable weight since such merely constitutes the recitation of but one possible use for the “bearing” being claimed and otherwise does not serve to structurally define the “bearing” per se.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Iverson et al., 4,096,957.

Regarding claim 1, Iverson et al. disclose, in Figure 1, a bearing comprising a first component **A1** (see marked-up attachment provided in the last Office action), a second component **44**, a third component **30**, and a pin **52**. The pin **52** has an external diameter **B1** and extends in a direction of a swiveling axis of the bearing and is borne in a bearing tube **50** having an internal diameter **A2** and an external diameter **A3**. The pin **52** has outer ends **A4** protruding from ends **A5** of the bearing tube **50**. The external diameter **A3** of the bearing tube **50** is considerably greater than the external diameter **B1** of the pin **50**. The first component **A1** and the second component **44** are borne alongside each other on the external diameter **A2** of the bearing tube **50**. The third component **30** transmits a force to the pin **52** (every part is under load during operation). The third component **30** is borne on one of the outer ends **A4** of the pin **52**. The third component **30** is able to rotate with respect to the pin **52**, the first component **A1**, and the second component **44**.

Regarding claim 5, a mid part of the pin has a slightly smaller external diameter than the outer ends of the pin (note that the parts 54, 58 are part of the pin and thus increase the pin diameter at the outer ends).

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al., 5,069,509.

Regarding claim 1, Johnson et al. disclose, in Figure 2, a bearing comprising a first component **66**, a second component **A2** (see marked-up attachment provided in the last Office action), a third component **A3**, and a pin **42**. The pin **42** has an external diameter and extends in a direction of a swiveling axis of the bearing and is borne in a bearing tube **44** having an internal diameter and an external diameter. The pin **42** has outer ends **46**, **47** protruding from ends of the bearing tube **44**. The external diameter of the bearing tube **44** is considerably greater than the external diameter of the pin **42**. The first component **66** and the second component **A2** are borne alongside each other on the external diameter of the bearing tube **44**. The third component **A3** transmits a force to the pin **42**. The third component **A3** is borne on one of the outer ends **46**, **47** of the pin **42**. The third component **A3** is able to rotate with respect to the pin **42**, the first component **66**, and the second component **A2**.

Regarding claim 2, the first component **66** has two bearing points **B1** (see marked-up attachment provided in the last Office action) located on a mid part of the bearing tube **44** and the second component **A2** has two bearing points **34** located alongside the two bearing points **B1** of the first component **66**.

### ***Claim Rejections - 35 USC § 103***

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al., 5,069,509, in view of Traktoren, DE-926,532.

Regarding claim 4, Johnson et al., as discussed, fail to disclose the bearing points of the first component and the second component are fitted with guide bushes. Traktoren teaches, in Figure 3, bearing points of a first component 2 and a second component 4 fitted with guide bushes 1,7 to reduce friction between the first component and the second component against a bushing tube 3. Therefore, as taught by Traktoren, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide guide bushes at the bearing points of the first component and the second component to reduce friction between the first component, the second component, and the bushing tube of Johnson et al.

***Allowable Subject Matter***

Claims 6-12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 6, the prior art of record fails to disclose or suggest a construction machine comprising, in combination, a second boom component articulated to an end of a first boom component by a bearing (lines 3-4) having a bearing tube (line 5), a pin borne in the bearing tube (lines 6-8), the pin having outer



ends protruding from the ends of the bearing tube, and a third component borne on at least one outer end of the pin and rotatable with respect to the pin and both the first and second boom components (line 15). The closest prior art, Huissoon, 7,287,949, would have suggested a pin borne in a bearing tube such as a bearing sleeve. However, the pin would not have ends protruding from the ends of the bearing tube as evidenced by Manning, 1,772,187, Figures 9 and 11, which would have suggested individual bearing tubes or one bearing tube flush with a pin in a two component bearing assembly rather than three components as claimed. Iverson et al., 4,096,957, teaches, three components. However, two of the components, i.e., the second and third components are not rotatable with respect to each other since these are fixed to a bucket.

Applicants novelty is unique for creating a bearing between construction machine components which accepts high forces acting upon components safely, which permits a long boom cylinder stroke and thus maximum boom reach by the machine, which permits simple assembly and removal of all the components, without having to separate the back and mid boom components from each other on removal and reassemble them on installation [007]; and,

regarding claims 7-12, these claims depend from claim 6.

### ***Response to Arguments***

Applicants' arguments filed June 30, 2008 have been fully considered but they are not persuasive.

With respect to Iverson et al., applicants argue that claim 1 recites a bearing at a joint between first and second articulated components on a construction machine and third component. In response, it should be noted that claim 1 does not recite "a bearing at a joint". Rather, claim 1 recites a "bearing" and then recites how that bearing is intended to be used. However, it is well-established by case law that patentability of a device claim is based on the structure of the device and not how that device is intended to be used. Applicants should also note that the claim scope is still unclear as indicated in the 35 USC 112, 2nd paragraph, rejection.

Applicants further argue that Iverson et al. fail to disclose a third component that transmits an applied force to the pin and can rotate with respect to the pin and the first and second components and that the third component of Iverson as indicated by the examiner is a reinforcement ring welded to the side of the bracket, which is the second component. In response, it should be noted that Iverson et al teach a pivot pin assembly and therefore all the components are under load due to external forces or just mere gravity. The component 30, as identified by examiner to be the third component, is able to rotate relative to the pin despite that the component is welded to the bracket. Note that the pin is not welded to the third component 30. Further, applicants should note that the feature 44 is now the second component 44.

With respect to Johnson et al., applicants argue that claim 1 is directed to a bearing for articulating three components about a fixed pin and sleeve wherein all three components are rotatable about the axis through the pin with respect to the pin. In response, the argument has not been found persuasive. First of all, the claim does not set forth "a fixed pin". Secondly, claim 1, lines 14-15, only recites that "the third component is rotatable with respect to the pin and the first and second components" and not that all components are rotatable with respect to the pin. Applicants further argue that the third component is "non-rotatably secured to the link portions of the pin and can not be rotated with respect to both the pin as well as the first and second component". In response, this has not been found persuasive since column 2, lines 50-53, clearly indicates that the link sets 22 of left and right hand links are 'articulately joined together by track hinge joints.

### ***Conclusion***

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harris et al., JP-2000-46037, show a similar bearing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

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/E. G./

Examiner, Art Unit 3679

October 23, 2008

/Daniel P. Stodola/  
Supervisory Patent Examiner, Art Unit 3679